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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-----------------------------|---------------------|------------------|
| 10/689,244 | 10/20/2003 | Andrew Spencer | 10014282-1 | 3876 |
| 22879 7590 04/16/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400 | | | | |
| EXAMINER CAO, CHUN | | | | |
| ART UNIT 2115 | | PAPER NUMBER | | |
| NOTIFICATION DATE 04/16/2008 | | DELIVERY MODE ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/689,244

Applicant(s)

SPENCER, ANDREW

Examiner

Chun Cao

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-20 and 24-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2 and 4-9 is/are allowed.
- 6) ☒ Claim(s) 10-20 and 24-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 2, 4-20 and 24-36 are presented for examination.
2. In view of the appeal brief filed on 2/14/08, PROSECUTION IS HEREBY REOPENED.
New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Thomas Lee/, Supervisory Patent Examiner, Art Unit 2115

3. The text of those applicable section of Title 35, U.S. Code not included in this action can be found in the prior Office Action.
4. Claims 10-20 and 24-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aizawa (Aizawa), U.S. patent no. 6,407,941 in view of Kojima (Kojima), US patent no. 6,741,570 and Trost (Trost), US patent no. 4,288,860.

As per claim 10, Aizawa discloses a system [fig. 1] comprising:

a host device [12, fig. 1]; and a memory card configured to couple to the host device [fig. 1]; wherein the memory card includes a storage media, wherein the memory card is configured to provide a first clock signal to the storage media at a first clock rate [fig. 1; col. 5, lines 30-34, 48-49].

Aizawa does not explicitly disclose that the memory card is configured to count a number of transactions received by the memory card from the host device during a time period, generating a clock signal at a clock rate varies in dependence on a number of transactions received by the memory card from the host device during a time period.

Kojima teaches of counting a number of transactions received by a memory card [cell buffer] during a time period [col. 1, line 63- col. 2, line 6].

Trost discloses that the memory card is configured to received an amount of data by the memory card [FIFO buffer] from the host device, and generating a clock signal at a clock rate varies in dependence on the amount of data [fig. 1; abstract all; col. 2, lines 3-34; col. 3, line 56- col. 4, line 4; col. 7, line 65-col. 8, line 10]. In summary, Kojima and Trost together teach the claimed invention, such as the memory card is configured to count a number of transactions received by the memory card from the host device during a time period, generating a clock signal at a clock rate varies in dependence on a number of transactions received by the memory card from the host device during a time period.

It would have been obvious to one of ordinary skill in the art at time the invention to combine the teachings of Aizawa and Kojima and Trost, because they disclose a data storage system for receiving an amount of data, the specify teachings of Kojima and Trost stated above

would improve the performance of Aizawa system adjusting the clock signal corresponding a data transmission rate to reduce power consumption of the system.

As per claim 11, Aizawa discloses that the memory card includes a processor system and a control circuit coupled to the processor system [fig. 1; col. 3, lines 14-26]. Kojima teaches of counting the number of transactions received by the memory card from the host device during the time period [col. 1, line 63- col. 2, line 6]. Trost discloses that the processor system is configured to cause the control circuit to set the rate of the first clock signal in response to the number of transactions [col. 4, lines 18-37, 58-65].

As per claim 12, Aizawa discloses that the memory card includes a buffer and a buffer management circuit [col. 3, lines 14-26]. Kojima discloses that the buffer management circuit [3, fig. 1] is configured to provide information to the processor system, and wherein the processor system is configured to count the number of transactions received by the memory card during the time period using the information [figure 1, col. 3, line 60-xol. 4, line 50].

As per claim 13, Trost discloses a clock configured to provide a second clock signal to the processor system and the control circuit at a second clock rate, and wherein the control circuit is configured to generate the first clock signal using the second clock signal [fig. 1; col. 2, lines 3-34; col. 3, line 56-col. 4, line 16; col. 7, line 65-col. 8, line 10].

As per claim 14, Aizawa discloses that host device comprises a digital camera [col. 3, lines 9-10].

As per claim 15, Aizawa discloses that the memory card includes a buffer and an interface coupled to the buffer, and wherein the interface is coupled to receive the transactions from the host device and provide the transactions to the buffer [col. 3, lines 14-20].

As per claim 16, Aizawa discloses that the transactions include read transactions configured to cause information to be read from the memory card and provided to the host device [col. 3, lines 19-20; col. 4, lines 23-37].

As per claim 17, Aizawa discloses that the transactions include write transactions configured to cause information to be written from the host device to the memory card [col. 3, lines 19-20; col. 4, lines 23-37].

As per claim 18, Aizawa discloses that the transactions include read transactions configured to cause first information to be read from the storage media and provided to the host device and write transactions configured to cause second information to be written from the host device to the memory card [col. 3, lines 19-20; col. 4, lines 23-37].

As to claims 19, 20 and 24-27 basically are the corresponding elements that are carried out the method of operating steps in claims 10-18. Accordingly, claims 19, 20 and 24-27 are rejected for the same reason as set forth in claims 10-18.

Regarding to claims 28-36 are written in mean plus functions and contained the same limitations as claims 10-18. Therefore, same rejection is applied.

Claims 1, 2, 4-9 are allowed over prior art.

Response to Arguments

5. Applicant's arguments filed on 2/14/2008 have been fully considered but are moot in view of new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao whose telephone number is 571-272-3664. The examiner can normally be reached on Monday-Friday from 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Chun Cao/

Primary Examiner, Art Unit 2115

4/7/08, 2007